

thors call such specimens also paratypes. This is, to our way of thinking, unfortunate since it does not clearly distinguish between the non-holotype specimens from the type locality and the non-holotype specimens from other places. Since it is possible that paratypes encompass sibling-species—and we refer here to paratypes from the type locality—it is even more probable that specimens from other localities may include sibling-species. Therefore, it seems only fitting that such subordinate "paratypes" be clearly distinguished in the original description. The term "hypotype" seems to fit the requirements well. And there seems to be no ruling by the International Commission on Zoological Nomenclature against this use of the term which allows a clear separation of specimens with different probabilities of uncertainty as to proper identity. If there is nothing more to recommend this differentiation than the fact that it may be of assistance to future workers, we think it sufficient justification to use the term "hypotype" in this sense. The definition of the paratype would then necessarily include the specification that it must come from the type locality while the hypotype does not.

Books, Periodicals, Pamphlets

THE GIANT AFRICAN SNAIL — A PROBLEM IN ECONOMIC MALACOLOGY

by Albert R. Mead
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University of Chicago Press. 257 pp.,
15 photographic illustr. November 28,
1961. \$7.50.

This book is unique. It is the only one of any scope dealing with the growing economic problems caused by land snails in general, and by the Giant African Snail in particular. There are good and timely reasons for such a reference work, which is the first in any language assembling knowledge of the economic effect of land mollusks, both snails and slugs. For this field of biological study, the author uses the term "Economic Malacology".

The Giant African Snail is a growing menace to be reckoned with. This five to six inch monster, while not a champion for size among land snails, is an "exceedingly hardy, tenacious,

variable and adaptable molluscan pest with a high reproductive potential and remarkably few natural enemies". Once started it is practically impossible to eradicate, and most man-devised methods for its control have not met with any signal success. The spread of this snail pest during World War II, including its build-up on the Hawaiian Islands, its fantastic ability to reproduce causing population explosions in the species, and its consequent depredations resulting from its omnivorous food habits all have served to create a "Giant African Snail Problem" of primary importance to the world.

Much has been written about the Giant African Snail in the world press and in scientific and agricultural journals. In recent years it has been the subject of considerable research and has led to the expenditure of much money to determine its present and potential economic danger and to develop successful means of control. Mead brings all of this scattered information together in organized form. This is a task for which he alone is preeminently qualified, having been personally associated with the Giant African Snail Problem for more than ten years. He has traveled many thousands of miles to gather firsthand data, has investigated the possible use of the snail as a food for people and animals, and is now studying a means of control by infecting it with a specific virus disease.

The book opens with a well-documented chapter on the present wide dispersal of the Giant African Snail, mainly by man, from its original home in East Africa. It continues with chapters on the factors favoring dispersal and survival, on its economic status as an agricultural pest, and on the various methods of control—chemical, mechanical, biological, legislative, and last, but by no means least, its control through human use as a possible food for poultry and livestock. There is an exceedingly interesting chapter on the phenomenon of decline following population explosion, the causes of which are not thoroughly understood and which could well be a subject for future intensive biological investigation leading, perhaps, to more effective control measures. The bibliography at the end of the book is a veritable gold mine of source information, covering over 40 pages, including 563 author listings and 881 separate titles.

Mead's work serves to bring into full focus the various attempts to control other snail and slug pests, with their successes and more frequent failures, together with the dangers inherent in approaching control problems without sound scientific research by qualified experts